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IMSA TECHNICAL BULLETIN IWSC #19-04

To: All IMSA WeatherTech Sportscar Championship GTD Participants
From: IMSA Competition
Date: 2 November 2018
Re: IWSC GTD 2019 Technical Regulations

IMSA has published the Technical Regulations for the IMSA WeatherTech Sportscar Championship as of today's date in Blackline and Redline forms for the GTD Class.

All cars will be held to these Technical Regulations for IMSA events.

After this date, changes to the IMSA WeatherTech Sportscar Championship Technical Regulations are issued via Technical Bulletin and an updated edition of the affected Technical Regulation(s) published, with an additional document showing the changes in red. The Blackline version is the official Regulations.

[2019 IWSC Technical Regulations GTD 11/02/18](#)

[2019 IWSC Technical Regulations GTD REDLINE 11/02/18](#)

Notable changes from the 2018 Regulations are as follows:

2.2. Balance of Performance Adjustment

2.2.1. To maintain competitive equivalency between Cars within the Class, and between Classes, IMSA uses the Balance of Performance process **as outlined in Article 6** to mandate adjustments to the Specification.

- a. Performance is evaluated using observed performance data; including, but not limited to, the IMSA Scrutineering data logger and official Timing and Scoring.

6.3. Adjustment Parameters

6.3.1. The following adjustments may apply:

- a. Minimum mass
- b. Engine restrictor and/or boost ratio change
- c. Maximum fuel cell capacity
- ~~d. Assigned refueling restrictor diameter~~
- e. Aerodynamic elements and/or settings
- f. Other parameters as designated by IMSA

9.1. General (Vehicle Systems)

9.1.1. All Vehicle Systems and associated sub-systems are listed in this Article.

- a. Where change to the ~~se Homologated~~ Vehicle Systems is permitted, regulatory text is **bold and underlined**.
- b. Where change to the ~~se Homologated~~ Vehicle Systems is prohibited, regulatory text is light grey.
- c. Advisory statements are in normal text.

9.4. Dimensions

9.4.1. General

- a. IMSA's measurement instruments are the official measurement instruments.

9.8. Aerodynamic Elements

9.8.6. Rear Wing Gurney

- a. ~~The rear wing gurney height for all Car Models may be defined via Balance of Performance Tables and associated Technical Bulletins~~

9.9. Engine System

9.9.1. General

- a. ~~Manufacturer seals must be respected~~

9.11. Drive System

9.11.1. General

- a. ~~Manufacturer seals must be respected~~

9.11.5. Gears

- b. In addition to the FIA Homologated gear set, Manufacturers of new homologations accepted by IMSA may declare two (2) additional gear sets via the Technical Eligibility Form by December 1st, 2018:
 - i. ~~Daytona Only Gear Set~~
 - ii. ~~Short/Street Circuit Gear Alternative Gear Set~~

9.13. Fuel System

9.13.1. General

- a. ~~Maximum Capacity~~
 - i. ~~The maximum fuel capacity for all Car Models is defined via Balance of Performance Tables and associated Technical Bulletins.~~
 - ii. ~~The maximum fuel capacity is the total volume of fuel contained in the Car.~~

9.13.3. Fuel Cell

- a. ~~Maximum Capacity~~
 - i. ~~The fuel cell maximum capacity for all Car Models is defined via Balance of Performance Tables and associated Technical Bulletins.~~

10.1. Series Scrutineering Data System

10.1.1. Cars must be equipped with the IMSA Scrutineering Data System at all Events.

- a. The manual for the Scrutineering Data System for the Class is the Bosch Scrutineering Systems Manual (BSSM), available on the IMSA Competitor site:
 - i. ~~Bosch Scrutineering System Manual version 1.4.3. 1.4.4.~~

10.3. Driver ID System

~~10.3.1. Cars must be equipped with a Driver ID system to identify the active Driver piloting the Car.~~

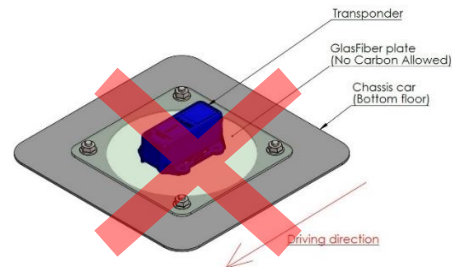
- a. ~~Driver ID Kit contains the following components:~~
 - i. ~~Three (3) Driver ID plugs~~
 - ii. ~~Transponder~~
 - iii. ~~Transponder Wiring Loom~~

10.3.2. ~~Driver ID transponder system must be installed and functioning during Events.~~

a. ~~Outside interference must not exceed those levels commonly used in the automotive industry, as described in 95/54/EEG.~~

b. ~~Transponder must be installed:~~

i. ~~In a horizontal orientation with the arrow pointed towards the front of the car as shown below:~~



ii. ~~With appropriate thermal protection in an area where the temperature cannot exceed 50 °C~~

iii. ~~Above non-conductive surfaces such as fiberglass or aramid panel~~

c. ~~Transponder consumes less than 40 mA (10-30 VDC), and must:~~

i. ~~Be a fused, 12-volt DC configuration~~

ii. ~~Meet the specifications defined by ISO 7637~~

d. ~~Transponder connection cables must be installed with appropriate thermal protection against temperatures exceeding:~~

i. ~~Black Cables: 150 °C~~

ii. ~~Blue Cables: 70 °C~~

e. ~~In cases where the cable installation requires severing the Driver ID transponder loom, the Entrant must:~~

i. ~~Fit an appropriate connector~~

ii. ~~Ensure the integrity of the system connectivity is always maintained~~

f. ~~Female Driver ID plug(s), (i.e. Driver #1 through Driver #5) may be installed inside the Car cockpit or attached to the individual Drivers' helmets.~~

i. ~~Alternative installation types must be approved by IMSA.~~

g. ~~Entrant is responsible for replacing a lost or damaged Driver ID Transponder.~~

i. ~~Replacement cost is listed in the IMSA Accessories Order Form~~

10.3.3. Cars must be equipped with a Driver ID system to identify the active Driver piloting the Car.

10.3.4. Driver ID plugs must be installed and connected per the BSSM.

10.3.5. Transponder and plugs must be tested and operate to the satisfaction of the Timing and Scoring Officials.

10.4. X2 Transponder System

10.4.1. Cars must be equipped with the X2 Transponder System Kit (Qty 1) to transmit scrutineering data from the car and serve as a backup to the primary Driver ID Transponder.

a. X2 Transponder Kit contains the following component(s):

i. Transponder.

ii. Isolation Mounts.

10.4.2. X2 transponder may be purchased via the IMSA Accessories Order Form. ~~is provided by IMSA during Safety Checks at each Event, and:~~

a. ~~Remains the property of IMSA~~

- ~~b. Entrants must surrender the transponder when required by IMSA~~
- ~~c. Entrants is responsible for replacing a lost or damaged X2 transponder, per the IMSA Accessories Order Form~~

11.1. Fuel Transfer

- 11.1.2. Fuel transferred to the autonomous supply tank must be delivered by means of a hose fitted with a self-sealing connector (e.g. dry break, cam-lock) connected to the autonomous supply tank.

11.2. Pit Tank

- 11.2.3. Refueling tank height is measured from the top surface of the vessel, not including vent, cover, cover plate, or fasteners, at a distance of 1.25 meters from the outermost face of the pit wall.
 - b. Once inspected by an IMSA Official the Autonomous Supply Tank and Trolley may not be moved until the conclusion of the Race **or upon an approved retirement via TIMS.**

11.3. Peripheral Connections

- 11.3.1. Tanks must be equipped with the IMSA-specified peripheral connections between the tank outlet and the refueling hose.
 - a. Parts must be purchased from RPXpress and used unmodified:

| Part Number | Part | Description |
|----------------------------|-------------------------------|--|
| BSR-FR FN40 | Outlet Flange | Bottom Tank 12-bolt housing |
| ATL-TF 147 | 12-Bolt Gasket | |
| BSR.FR.R.36GOLD | 36.0mm Restrictor | Upper Restrictor (for positive seal to Elbow) |
| BSR-FR 1981 | Bottom 80 deg. Elbow | Female Camlock x 2" Male |
| BSR-FR R003 | Deadman Valve | Stainless Deadman Valve |
| BSR.P.5K.RPX.SS | Adapter | Adapter 2" Male to 1 1/2" Camlock |
| BSR.P.5K56.SS | Restrictor Housing | Deadman Outlet, 2" Male to 1 1/2" Camlock |

11.4. Refueling Hoses

- 11.4.1. Refueling/vent hoses must have one end equipped with a self-sealing connector to fit the autonomous supply tank outlet.
- 11.4.2. Refueling/vent hoses may be protected for the sole purpose of resisting abrasion damage.
 - a. Cover must be easily removable by means of full-length Velcro or zipper.
 - b. Cover must be non-reflective
- 11.4.3. Hose maximum inside diameter
 - a. Dual-Port systems must be less than 1.5 inches for all hoses.
 - b. Single-Port (coaxial) systems must be less than 1.5 inches for Refueling Hose and less than 75.0mm for the vent hose
- 11.4.6. Cars employing an approved offside refueling system, must have a **refueling vent** hose with a minimum length of six (6) meters, connectors included.

11.5. Trolley Pit Tank Support Stand

11.5.1. The tank must be attached to one of the following:

- a. To a trolley meeting the following requirements:
 - i. All tower components must be assembled without any degree of freedom in relation to the trolley.

~~11.5.2. The base of the trolley must:~~

- ii. Have a surface area greater than two (2) square meters.
- iii. ~~Be installed with~~ Utilize four (4) self-braking casters.
- iv. Be ballasted with a weight exceeding that of the tank when filled with fuel.

- b. Scissor style (X-brace) stand

11.7. Refueling Restrictor

11.7.2. Refueling Restrictor must meet the following criteria:

- a. Material must be an aluminum alloy.
- b. Must ~~be in compliance~~ comply with the ~~restrictor part drawing~~ IMSA Fuel Restrictor Part Drawing at the end of these Technical Regulations.
- c. Restrictor size varies from 22.0 mm to 34.0 mm by discrete increments 0.25 mm
- d. Bore tolerance (+0.00 mm / -0.05 mm)

11.7.5. Refueling Restrictors are sealed by IMSA Technical Officials.

- b. The following items must be drilled for safety-wire sealing of the restrictor
 - i. Two (2) adjacent Bolt heads of the Restrictor Housing
 - ii. Two (2) Hinge Bolts (threaded section) of the Outlet Pipe Cam Lock
 - iii. Two (2) Lock Lever Arms of the Refueling Hose Cam Lock

